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EXAMINER	
GOLD, AVI M	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/944,292	Applicant(s) GARGIULO ET AL.	
	Examiner AVI GOLD	Art Unit 2457	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _27 May 2009_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-11,13-16,18-36 and 38-54_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-11,13-16,18-36 and 38-54_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to the pre-brief appeal conference decision filed on May 27, 2009. Claims 1-11, 13-16, 18-36, and 38-54 are pending.

Response to Amendment

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 26, 31, 41, 50, and 52 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 26 and 31 teach a network comprising a server, which can be implemented on software. The idea that the server can be embodied fully in software makes the server, software per se and non-statutory. Claims 41 and 52 teach a node for use on a subset and a network of nodes; wherein the nodes can be implemented on software. The idea that the nodes can be embodied fully in software makes the node for use on a subset and the network of nodes, software per se and non-statutory. Claim 50 is not limited to tangible embodiment. In view of Applicant's disclosure the newly amended portion of the specification submitted October 27, 2008, shows that the claim can be implemented using computer data signals (a non-tangible embodiment) embodied in a transmission medium. As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

Claims 27-30, 32-36, 38-40, 42-45, 53, and 54 are necessarily rejected as being dependent upon the rejection of claims 26, 31, 41, and 52.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 52 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 52 recites the limitation "the Distributed Query" in the 3rd limitation. There is insufficient antecedent basis for this limitation in the claim.

Claims 53 and 54 are necessarily rejected as being dependent upon the rejection of claim 52.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: A network device found in claim 51.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4, 5-11, 13-15, 21-29, 30-36, 38-40, 46, 47, and 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunn et al., U.S. Patent No. 5,493,722, in view of Tobol U.S. Patent No. 5,253,252.

Gunn teaches the invention as claimed including a method for controlling data transmissions on a single channel radio frequency network (see abstract).

Regarding claims 1, 26, and 46, Gunn teaches a method, network, and a computer readable medium having computer executable code for identifying a plurality of nodes on a network, comprising:

receiving a query sent from a caller node wherein (col. 4, lines 4-22, Gunn discloses a node connecting to a network and a data transmission sent):

the query comprising a delay constant (fig. 2A, col. 4, lines 22-26, Gunn discloses the data transmission from the node including predetermined time values);

the query is received by at least one of a plurality of nodes on a network (fig. 2A, col. 4, lines 22-37);

determining at the at least one node an answer to the query (fig. 2B, col. 5, lines 30-45);

after the delay, forwarding the answer to the query from the at least one node to the caller node, wherein the caller node is operable to maintain a list of nodes which responded to the query (fig. 2B, col. 5, lines 30-45).

Gunn fails to teach the limitation further including calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node.

However, Tobol teaches a token device for distributed time scheduling in a data processing system (see abstract). Tobol teaches calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node (col. 10, lines 37-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gunn in view of Tobol to calculate a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node. One would be motivated to do so because it is an efficient way to prevent network traffic.

Regarding claims 2 and 27, Gunn teaches a method and network as recited in claims 1 and 26, further comprising calculating a timeout period based at least in part on a network address; and after the timeout period, identifying a plurality of nodes which responded to the query (fig. 2A, col. 4, lines 22-37).

Regarding claims 3 and 28, Gunn teaches a method and network as recited in claims 1 and 27, wherein each of the plurality of nodes on the network forwards to the caller node answer to the query at different times (fig. 2A, col. 4, lines 22-37, Gunn discloses different timers used).

Regarding claims 4 and 29, Tobol teaches a method and network as recited in claims 1 and 27, wherein each of the plurality of nodes on the network calculates a respective delay period by at least multiplying the delay constant by at least a portion of its own network address (col. 10, lines 37-42).

Regarding claims 5 and 30, Gunn teaches a method and network as recited in claims 1 and 26, wherein each of the plurality of nodes on the network are on a subnet, the query posed by the caller node comprising a subnet mask (col. 4, lines 5-37).

Regarding claims 6 and 31, Gunn teaches a method and a system of identifying nodes on a network, comprising:

sending a query from a caller node to a subnet, the query comprising a delay constant:

receiving the query at each of a plurality of nodes on the subnet;

calculating a delay period based at least in part on the delay constant;

sending a local response to the query from the at least one node to at least one other node on the subnet;

receiving, at one of the plurality of nodes on the subnet, the local response and compiling a list identifying responding nodes; and

sending the list of responding nodes to the caller node (fig. 2A, 2B, col. 4, lines 5-37, col. 5, lines 30-45).

Gunn fails to teach the limitation further including calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node.

However, Tobol teaches calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node (col. 10, lines 37-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gunn in view of Tobol to calculate a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node. One would be motivated to do so because it is an efficient way to prevent network traffic.

Regarding claims 7 and 32, Gunn teaches a method and system as recited in claims 6 and 31, wherein each of the plurality of nodes on the subnet sends its local response at different times (col. 4, lines 22-37).

Regarding claims 8 and 33, Gunn teaches a method and system as recited in claims 7 and 32, wherein each of the plurality of nodes on the subnet calculates a

respective delay period to wait prior to sending its local response (fig. 2A, col. 4, lines 5-37).

Regarding claims 9 and 34, Gunn teaches a method and system as recited in claims 7 and 32, wherein the one of the plurality of nodes on the subnet compiling the list identifying the responding nodes is a node first to respond with a local response to the query (fig. 2A, 2B, col. 5, lines 30-45).

Regarding claims 10 and 35, Gunn teaches a method and system as recited in claims 9 and 34, wherein the node compiling the list identifying the responding nodes calculates a timeout period indicating when a last of the plurality of nodes will send its local response and receives the local responses until the timeout period has expired (fig. 2A, col. 4, lines 22-37).

Regarding claims 11 and 36, Gunn teaches a method and system as recited in claims 10 and 34, wherein the timeout period is calculated by the node compiling the list identifying the responding nodes by multiplying by the delay constant an address of a node having a highest IP address on the subnet (fig. 2A, col. 4, lines 22-37).

Regarding claims 13 and 38, Gunn teaches a method and system as recited in claims 11 and 36, wherein the query further comprises a subnet mask (fig. 2A, col. 4, lines 5-37).

Regarding claims 14 and 39, Gunn teaches a method and system as recited in claims 6 and 31, wherein the query from the caller node comprises information identifying which of the plurality of nodes on the subnet is to compile the list of responding nodes (fig. 2A, col. 4, lines 5-37).

Regarding claims 15, Gunn teaches a method and system as recited in claims 14 and 39, wherein each of the responding nodes sends its local response to the node identified in the query (fig. 2A, col. 4, lines 5-37).

Regarding claims 21, 49, 50, 51, and 52, Gunn teaches a method of identifying a plurality of nodes on a network, a program storage device, a computer data signal, a network device, and a network of nodes, comprising:

receiving a query sent from a caller node wherein:

the query comprising a delay constant;

the query is received by at least one of a plurality of nodes on a network;

calculating a delay period based at least in part on the delay constant;

transmitting an answer to the query from the at least one node; and

monitoring, at a responder node which received the query, responses from other nodes to the query and maintaining a list of nodes which responded to the query (fig. 2A, 2B, col. 4, lines 5-37, col. 5, lines 30-45).

Gunn fails to teach the limitation further including calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node.

However, Tobol teaches calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node (col. 10, lines 37-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gunn in view of Tobol to calculate a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node. One would be motivated to do so because it is an efficient way to prevent network traffic.

Regarding claim 22, Gunn teaches the method of claim 21, wherein each node which received the query waits a respective delay period unique to the node before responding to the query (fig. 2A, 2B, col. 4, lines 5-37).

Regarding claim 23, Gunn teaches the method of claim 21 further comprising transmitting from the responder node to the caller node after a query timeout period the list of nodes which responded to the query (fig. 2A, 2B, col. 4, lines 5-37).

Regarding claim 24, Gunn teaches the method of claim 23, wherein the responder node is the first node to respond to the query (fig. 2A, 2B, col. 4, lines 5-37).

Regarding claim 25, Gunn teaches the method of claim 23, wherein a selected one of the plurality of nodes is designated within the query to maintain and transmit to the caller node the list of nodes which responded to the query (col. 5, lines 30-45).

Regarding claim 47, Gunn teaches a computer readable medium having computer executable code for identifying nodes on a network, comprising:

server code for use by a server for sending a query to a subnet, the query comprising a delay constant:

client code for use by a plurality of client nodes on the subnet for receiving the query from the server, wherein in response to the query, the client code for at least one of the plurality of client nodes on the subnet sends, after a delay period based at least in part on the delay constant, a local response to the query to at least one other client node on the subnet, the client code of the at least one other client node on the subnet compiling a list identifying responding nodes and sending the list identifying the responding nodes to the server (fig. 2A, 2B, col. 4, lines 5-37, col. 5, lines 30-45).

Gunn fails to teach the limitation further including calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node.

However, Tobol teaches calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node (col. 10, lines 37-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gunn in view of Tobol to calculate a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node. One would be motivated to do so because it is an efficient way to prevent network traffic.

8. Claims 16, 18-20, 41-45, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunn et al., U.S. Patent No. 5,493,722, in view of Engdahl et al., U.S. Patent No. 5,471,461, in view of Tobol et al., U.S. Patent No. 5,253,252, further in view of Novaes, U.S. Patent No. 6,791,981.

Gunn teaches the invention substantially as claimed including a method for controlling data transmissions on a single channel radio frequency network (see abstract).

Regarding claims 16, 41, and 48, Gunn teaches a method of controlling a node in a network, a node for use on a subnet, and a computer readable medium including computer executable code to be executed by a node on a subnet, comprising:

receiving at the node a query from a caller node, the query comprising a delay constant;

determining an answer to the query;

if the node does not have the lowest address in the network, waiting the period of time and then responding to the query;

if the node does have the lowest address in the network, listening for responses to the query from other nodes in the network and preparing a list of responding nodes; and transferring the list of responding nodes to the caller node (fig. 2A, 2B, col. 4, lines 5-37, col. 5, lines 30-45.

Gunn fails to teach the limitation further including determining whether a node has the lowest address in a network, calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node, if the node does have the lowest address in the network, determining an address of a node having a highest address in the network and determining, based on the highest address in the network, a query timeout period.

However, Engdahl teaches industrial communication networks that are employed to exchange data among control systems for factory machinery (see abstract). Engdahl teaches the determination of the lowest network address (col. 14, lines 20-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gunn in view of Engdahl to determine whether a node has the lowest address in a network. One would be motivated to do so because it allows for all the active nodes to have an opportunity to send a message (col. 3, lines 49-51).

Gunn and Engdahl fail to teach the limitation further including calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node, if the node does have the lowest address in the network, determining an address of a node having a highest address in

the network, and determining, based on the highest address in the network, a query timeout period.

However, Tobol teaches calculating a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node (col. 10, lines 37-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gunn and Engdahl in view of Tobol to calculate a delay period by at least multiplying the delay constant by at least a portion of a network address associated with the at least one node. One would be motivated to do so because it is an efficient way to prevent network traffic.

Gunn, Engdahl, and Tobol fail to teach the limitation further including if the node does have the lowest address in the network, determining an address of a node having a highest address in the network, and determining, based on the highest address in the network, a query timeout period.

However, Novaes teaches fault tolerant packet transmission systems involved in the management of multicast communications (see abstract). Novaes teaches the use of a node with the highest IP address chosen as the network leader and an eventual timeout period based on the leader (col. 14, lines 15-23).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gunn, Engdahl, and Tobol in view of Novaes to determine an address of a node having a highest address in the network if the node does have the lowest address in the network, and determining, based on the highest address in the

network, a query timeout period. One would be motivated to do so because it is an efficient way to choose the network leader.

Regarding claim 42, Tobal teaches a node as recited in claim 41, wherein the node determines the period to wait before responding by multiplying its network address by the delay constant (col. 10, lines 37-42).

Regarding claims 18 and 43, Gunn teaches a method and a node as recited in claims 16 and 41, wherein the query from the caller node includes a subnet mask, the node determining whether it has the lowest address in a subnet by referring to the subnet mask (col. 4, 5).

Regarding claims 19 and 44, Gunn teaches a method and a node as recited in claims 18 and 43, wherein the address of the node having the highest address in the subnet is determined by referring to the subnet mask (col. 4, 5).

Regarding claims 20 and 45, Gunn teaches a method and a node as recited in claims 19 and 44, wherein a query timeout period is calculated by the node by multiplying the highest address in the subnet by a delay constant (col. 4, 5).

9. Claims 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunn et al., in view of Tobol, further in view of Torres, U.S. Patent No. 6,725,263.

Gunn teaches the invention substantially as claimed including a method for controlling data transmissions on a single channel radio frequency network (see abstract). Tobol teaches the invention as claimed including a token device for distributed time scheduling in a data processing system (see abstract).

Regarding claims 53 and 54, Gunn and Tobol teach the method of claims 1 and 6.

Gunn and Tobol fail to teach the limitation further including the caller node including the delay constant in the query to customize response times from the plurality of nodes based at least in part on projected network traffic.

However, Torres teaches systems and methods for analyzing network traffic (see abstract). Torres teaches the use of projecting network traffic (column 5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gunn and Tobol in view of Torres including the caller node including the delay constant in the query to customize response times from the plurality of nodes based at least in part on projected network traffic. One would be motivated to do so because it is an accurate way to customize response times.

Response to Arguments

10. Applicant's arguments with respect to claims 1-11, 13-16, 18-36, and 38-54 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,104,701 to Avargues et al.

U.S. Pat. No. 5,604,868 to Komine et al.

U.S. Pat. No. 5,471,461 to Engdahl et al.

U.S. Pat. No. 5,987,011 to Toh

U.S. Pat. No. 6,574,197 to Kanamaru et al.

U.S. Pat. No. 6,112,247 to Williams

U.S. Pat. No. 5,317,742 to Bapat

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AVI GOLD whose telephone number is (571)272-4002. The examiner can normally be reached on M-F 8:30 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/A. G./
Examiner, Art Unit 2457

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